



safety data sheet

according to 1907/2006/EC, article 31 – 2015/830/EU

version no.:

valid from: 01.06.2022

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Product group FINOFRAME Liquid **(FINOFRAME ZR, FINOFRAME ZR HT)**

1. Identification of the substance/ mixture and of the company/ undertaking

1.1. Product identifier

FINOFRAME Liquid (FINOFRAME ZR, FINOFRAME ZR HT)

1.2. Relevant identified uses of the substance or mixture and uses advised against

Water-based colouring liquid for colouring zirconium dioxide ceramics in the dental technology

1.3. Details of the supplier of the safety data sheet

Company name: Fino GmbH
Street: Mangelsfeld 18
Place: 97708 Badk Bocklet
Country: Germany
Telephone/ fax: +49 9708 909429/ +49 9708 909421
e-mail: info@fino.com
Internet: www.fino.com

1.4. Emergency telephone number

Giftnotrufzentrale Berlin
Telephone (24hrs.) +49 30 30686 700

2. Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) no. 1272/2008

The product is a mixture containing water and polyethylene glycol as main ingredients. These statements do not apply to the mixture but to individual ingredients and do not indicate the classification of the product. Not all ingredients are included in every product variant/shade.

FINOFRAME ZR A1 – D4

FINOFRAME ZR HT A1 – D4

Hazard statements

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.

Precautionary statements

P234	Keep only in original packaging.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P390	Absorb spillage to prevent material damage.

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P501

Dispose of contents/container in accordance with local/ regional/ international regulations.

GHS-Pictograms



Signal word: Danger

2.2. Label elements

Labelling according to Regulation (EC) no. 1272/2008	see 2.1
Hazard pictogram(s)	see 2.1
Signal word(s)	see 2.1
Hazard statement(s)	see 2.1

2.3. Other hazards

A PBT/vPvB assessment is not available as a chemical safety assessment is not required.

3. Composition/information on ingredients

3.1. Substances

This product is a mixture.

3.2. Mixtures

Chemical Characterization/ Description

Mixture from:

- water
- polyethylene glycol
- and the substances listed below if applicable

Not all substances are included in every product variant/ every colour shade.

FINOFRAME Liquid is water-based and does not contain acid, therefore it does not corrode metal instruments or metal workbench surfaces. Also it does not corrode the heating elements in the sintering furnace.

substance	formula	CAS-no.	Einecs-no.	hazard categories	share in %
Polyethylene glycol 400	HO(C ₂ H ₄ O) _n H	25322-68-3	500-038-2	substance with limit value for exposure at workplace/ max. workpl. concentration	5 - 100
Iron (III) chloride hexahydrate	FeCl ₃ · 6H ₂ O	10025-77-1	231-729-4	Met. Corr. 1, Acute Tox 4 oral, Skin Irrit. 2, Eye Dam. 1 H290 H302 H315 H318	0 - 10



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Substances with limit values for exposure at the workplace/

Maximum workplace concentrations and biological tolerance values at work

Polyethylene glycol, Cobalt and cobalt compounds, Manganese and its inorganic compounds, Nickel and nickel compounds

Additional notes

none

4. First aid measures

4.1. Description of first aid measures

General notes

Consult a doctor if health problems occur.
Show this safety data sheet.

After inhalation

Remove the person to fresh air and ensure unobstructed breathing.
Call poison control centre/doctor.

After skin contact

Remove all contaminated clothing immediately. Wash skin immediately with plenty of soap and water, rinse well.

After eye contact

Rinse opened eye gently with water for several minutes. Remove any contact lenses if possible.
Continue rinsing. Consult an ophthalmologist if symptoms persist.

After swallowing

Immediately call poison control centre/doctor. Rinse out mouth and drink plenty of water.

4.2. Most important symptoms and effects, both acute and delayed

No other relevant information available.

4.3. Indication of any immediate medical attention and special treatment needed

No other relevant information available.

5. Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Water spray jet (mist), dry extinguishing agent (powder), carbon dioxide (CO₂), alcohol resistant foam

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

The product variant "Blocker" is combustible.
Formation of toxic gases possible when heated or in case of fire.

5.3. Advice for firefighters

The product itself does not burn with the exception of the product variant "Blocker". Adjust extinguishing measures to the environment. Stay in the danger zone only with self-contained



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breathing apparatus. Avoid discharge of extinguishing water into surface and ground water and sewage systems.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure a sufficient supply of fresh air. Use a suction system. Do not inhale dust/ aerosole. Avoid contact with skin, mouth eyes and clothing. Use personal protective equipment.

6.2. Environmental precautions

Do not allow to enter surface water, ground water or sewage system.

6.3. Methods and material for containment and cleaning up

Cover the sewage system. Collect in suitable, closed containers and take for disposal.

6.4. Reference to other sections

Safe handling

see section 7

Personal protective equipment

see section 8

Disposal

see section 13

7. Handling and storage

7.1. Precautions for safe handling

Notes on safe handling

Ensure a sufficient supply of fresh air. Use a suction system. Do not inhale dust/ aerosol. Avoid contact with skin, mouth, eyes and clothing. Use personal protective equipment.

General hygiene measures

Do not eat, drink or smoke in areas where work is carried out. Wash hands after use. Take off soiled clothing and protective equipment before entering areas where food is eaten.

Notes on fire and explosion protection

Keep away from sources of ignition. Do not smoke.

Further information on handling

Observe occupational exposure limits.

7.2. Conditions for safe storage, including any incompatibilities

Store in the original container. Store break-proof.

Depending on the product variant, store at 4-10°C (follow instructions for use).

7.3. Specific end use(s)

Water-based colouring liquid for colouring zirconium dioxide ceramics in the dental technology

8. Exposure controls/ personal protection

8.1. Control parameters

Occupational exposure limits (TRGS 900)

Polyethylenglycol (PEG 200-600)

inhalable fraction

200 mg/m³, peak limitation 2(II)

Maximum workplace concentration (MAK- and BAT values list)



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Polyethylene glykol (PEG) (average molar mass 200-600)
MAK, inhalable fraction 250 mg/ m³, peak limitation II(2), Preg gr C,
see section Xc

Additional notes: The lists valid at the time of preparation were used as a basis.

8.2. Exposure controls/ personal protection

Suitable technical control equipment

Technical measures and the application of appropriate working methods have priority over using personal protective equipment. Ensure good ventilation. This can be achieved by local suction or general exhaust air.

Protection and hygiene measures

Ensure good ventilation. Use a suction system. Do not inhale dust/ aerosol. Avoid contact with skin, mouth, eyes and clothing. Do not smoke, eat or drink while working. Keep away from food and drink. Wash hands after use. Take off soiled clothing and protective equipment before entering areas, in which food is eaten.

Respiratory protection

In case of insufficient suction/ ventilation wear respiratory protection (do not inhale dust/ aerosol). Filter class FFP2.

Eye/ face protection

Wear tightly fitting safety glasses.

Hand protection

Use suitable protective gloves. Suitable material: Butyl rubber, NBR (nitrile rubber), NR (natural rubber, natural latex).

The selection of a suitable glove depends not only on the material but also on other quality features and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of glove materials cannot be calculated in advance and must therefore be checked before use.

Penetration time of the glove material: The exact penetration time must be obtained from the protective glove manufacturer and must be observed.

Body protection

Use protective clothing.

Environmental exposure controls

See sections 6 and 7.

9. Physical and chemical properties und chemische Eigenschaften

9.1. Information on basic physical and chemical properties

Appearance	liquid
Colour	yellowish, brownish, greyish, pink, pinkish, bluish
Odour	almost odourless
Odour threshold	not applicable
pH value	not applicable
Melting point	not determined
Freezing point	not determined



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Initial boiling point and boiling range	not determined
Flash point	not determined
Evaporation rate	not determined
Flammability (solid, gas)	not determined
Upper/ lower flammability or explosive limits	not determined
Vapour pressure/ density	not determined
Relative density (20°C)	not determined
Solubility in water/ miscibility	soluble in water
Solubility in other solvents	not determined
Partition coefficient: n-octanol/water	not determined
Auto-ignition temperature	not self-igniting
Decomposition temperature	not determined
Viscosity	not determined
Explosive properties	not explosive
Oxidising properties	not determined

9.2. Other information

No other relevant information available.

10. Stability and reactivity

10.1. Reactivity

No other relevant information available.

10.2. Chemical stability

The product is chemically stable under normal environmental conditions (room temperature).

10.3. Possibility of hazardous reactions

Formation of toxic gases possible when heated or in case of fire.

10.4. Conditions to avoid

Protect from heat. Protect from sunlight. Keep away from sources of ignition. Do not smoke.

10.5. Incompatible materials

No other relevant information available.

10.6. Hazardous decomposition products

Formation of toxic gases possible when heated or in case of fire.

11. Toxicological information

11.1. Information on toxicological effects

According to the information available, no reactions harmful to health are known to occur when handled and stored properly.

The following hazard and precautionary statements do not apply to the mixture but to individual ingredients and do not indicate the classification of the product. Not all statements are valid for all product variants/ shades.

See 2.1.

Acute toxicity

Harmful if swallowed.

Toxic if swallowed or inhaled.



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Corrosion and irritation (skin corrosion/ irritation/ serious eye damage/irritation)

Causes skin irritation.

Causes severe eye damage.

Causes severe eye irritation.

Respiratory or skin sensitisation

May cause allergic skin reactions.

May cause allergy, asthma-like symptoms or breathing difficulties if inhaled.

May irritate the respiratory tract.

Germ cell mutagenicity

Suspected of causing genetic defects.

Carcinogenicity

Suspected of causing cancer when inhaled.

Reproductive toxicity

May damage fertility or the unborn child.

STOT-single exposure

Toxic if swallowed or inhaled.

Harmful if swallowed.

STOT-repeated exposure

Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard

Toxic if swallowed or inhaled.

12. Ecological information

No environmental problems are to be expected when used properly. Do not allow to enter water, ground water or sewage system.

12.1. Toxicity

Very toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

No other relevant information available.

12.3. Bioaccumulative potential

No other relevant information available.

12.4. Mobility in soil

No other relevant information available.

12.5. Results of PBT and vPvB assessment

A PBT/vPvB assessment is not available as a chemical safety assessment is not required.

12.6. Other adverse effects

No other relevant information available.



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13. Disposal considerations

13.1. Waste treatment methods

Dispose of product and packaging in accordance with local/ regional/ national/ international regulations. Do not dispose of together with household waste. Do not allow to enter water, ground water or sewage system.

14. Transport information

The information below does not apply to the mixture but to individual ingredients and does not indicate the classification of the product.

Cobalt(II) Chloride Hexahydrate

14.1. UN number not applicable

14.2. UN proper shipping name not applicable

14.3. Transport hazard class(es) not applicable

14.4. Packing group not applicable

14.5. Environmental hazards no
Indicator for environmentally hazardous substances

14.6. Special precautions for user see sections 6-8

14.7. Transport in bulk according to Annex II of MARPOL and the IBC-Code
Not applicable.

15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

The product falls under the EC Directive 93/42/EEC for medical devices, resp. Regulation (EU) 2017/745 (MDR).

15.2. Chemical safety assessment

A chemical safety assessment was not carried out.

16. Other information

The information given in this safety data sheet is based on our present knowledge and experience and refers to the product in the state of delivery. The information is intended to provide guidelines for the product during storage, processing, transport and disposal. They are not transferable to other products. Insofar as the product is mixed, blended or processed with other materials or is subjected to processing, the information in this safety data sheet cannot be transferred to the new material produced in this way, unless expressly stated otherwise. However, no warranty, guarantee or surety, either explicit or implicit, is made as to the accuracy, reliability and/or completeness of this information. We urge persons receiving this information to verify the suitability and completeness of this information for their particular application.